

Update on the Construction, Operation and Performance of the Stormwater Treatment Areas

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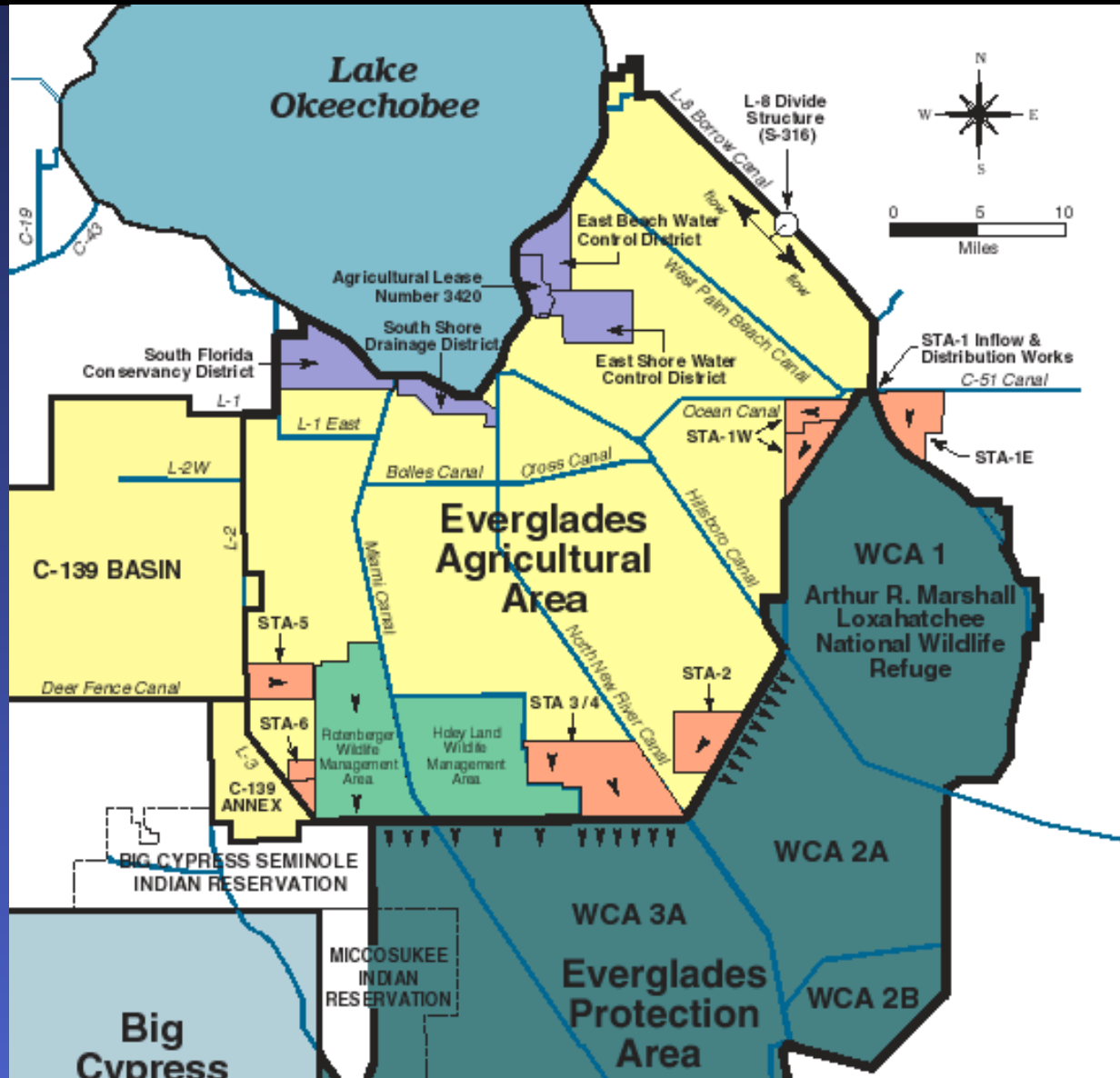


sfwmd.gov

Overview

- STAs - Six large constructed wetlands totaling over 41,000 acres implemented by the South Florida Water Management District and U.S. Army Corps of Engineers
 - Everglades Settlement Agreement
 - Everglades Forever Act
- Phosphorus reduction target: 50 ppb
 - in conjunction with upstream Best Management Practices

SOUTH FLORIDA WATER MANAGEMENT DISTRICT



STA-1W, STA-2, STA-5 and STA-6 are operational (18,093 acres)

STA-1E and STA-3/4 are under construction (21,830 acres)

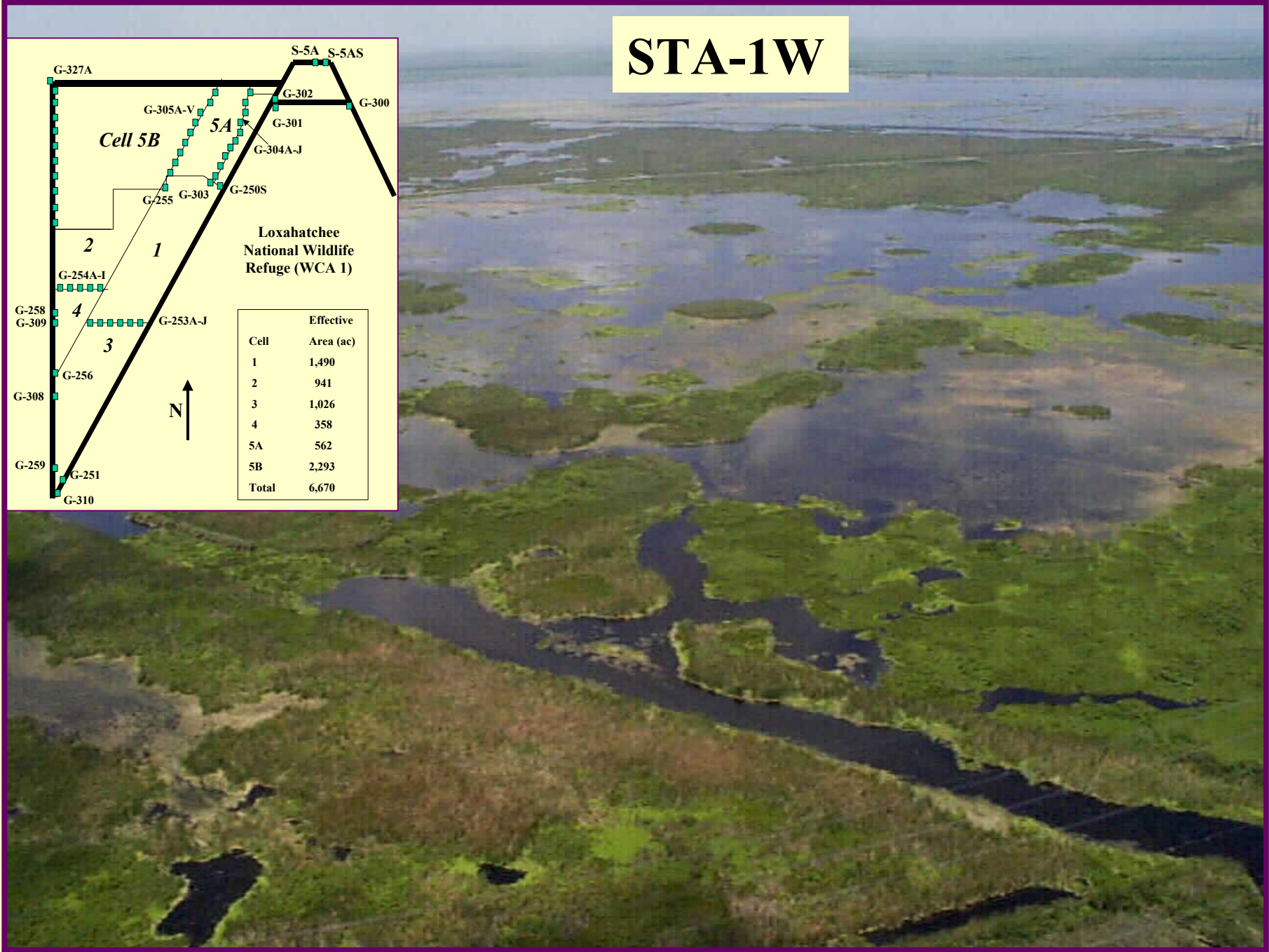
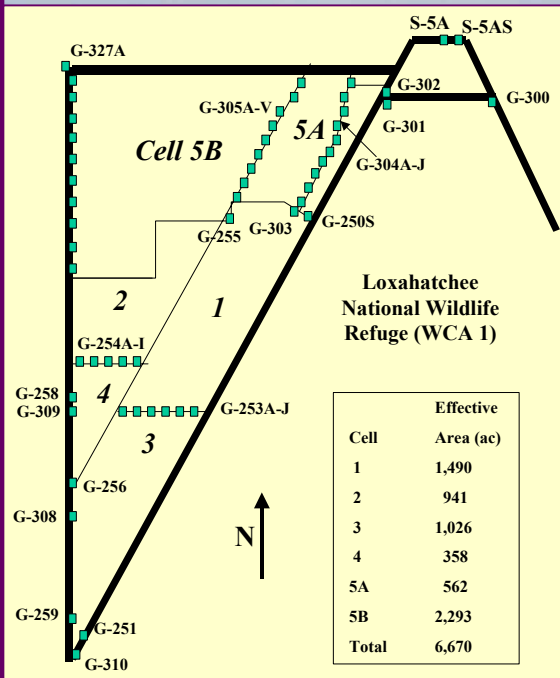
STA-6 Section 2 is in design (1,500 acres)

STA Performance

- **Water Year 2002 Performance**
 - 670,000 acre feet water treated; inflow 143 ppb
 - Average discharge concentration of 39 ppb
 - 84 metric tons of TP removed (71% removal)
 - EAA BMPs: 55% load reduction

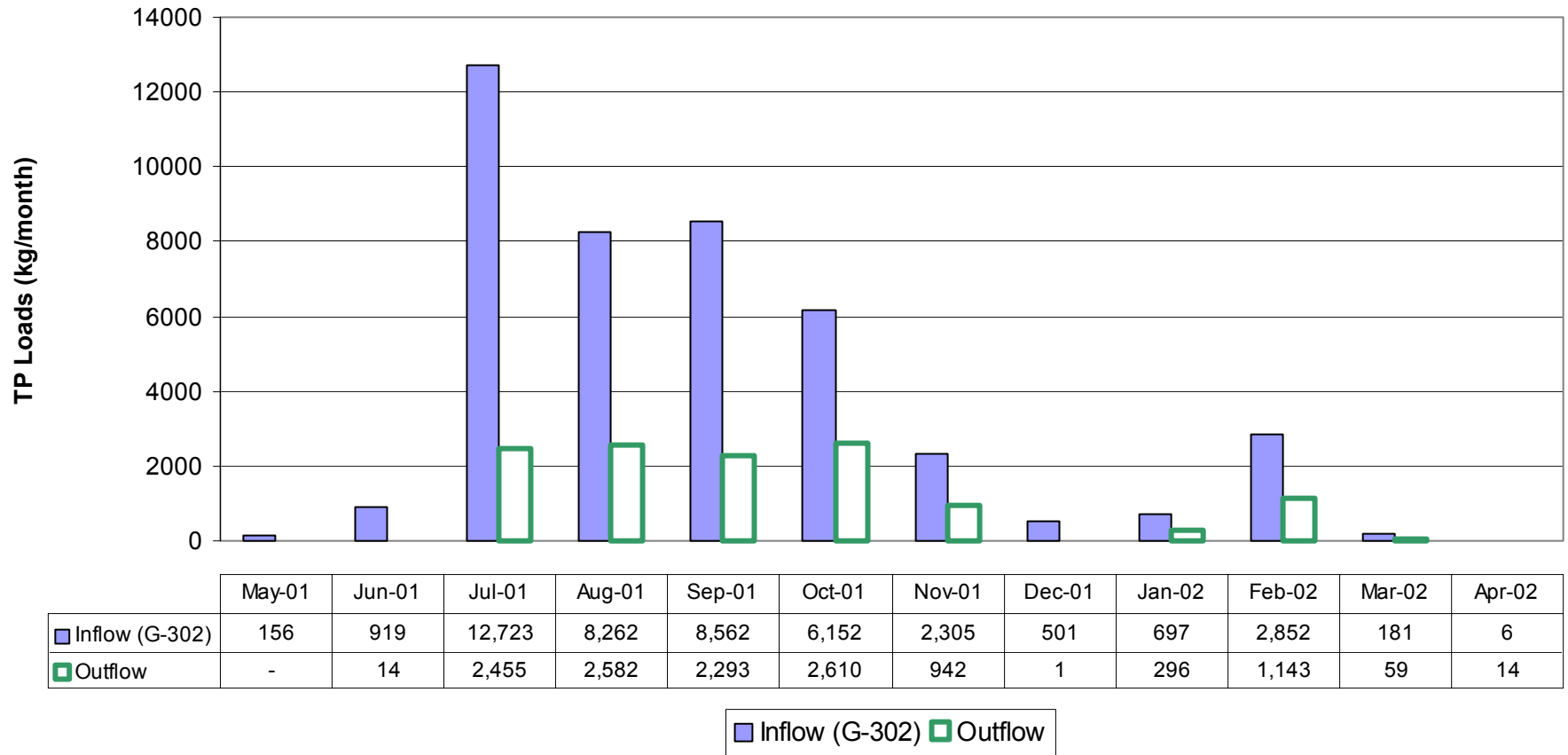
- **Performance to date**
 - Over 200 metric tons of phosphorus removed
 - EAA BMPs: 3-yr average of 59% load reduction

STA-1W



STA-1W Load Reductions - Water Year 2002

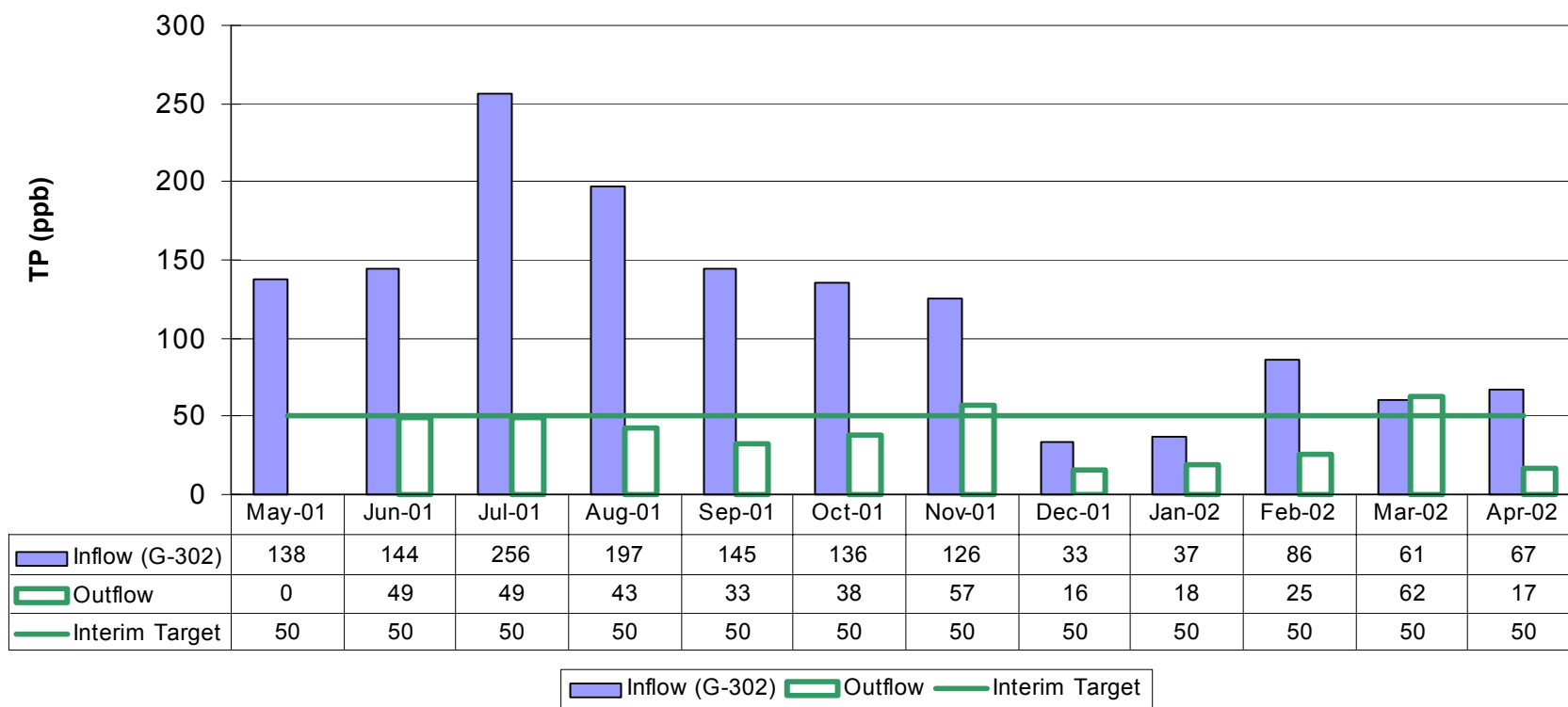
237,000 acre feet treated



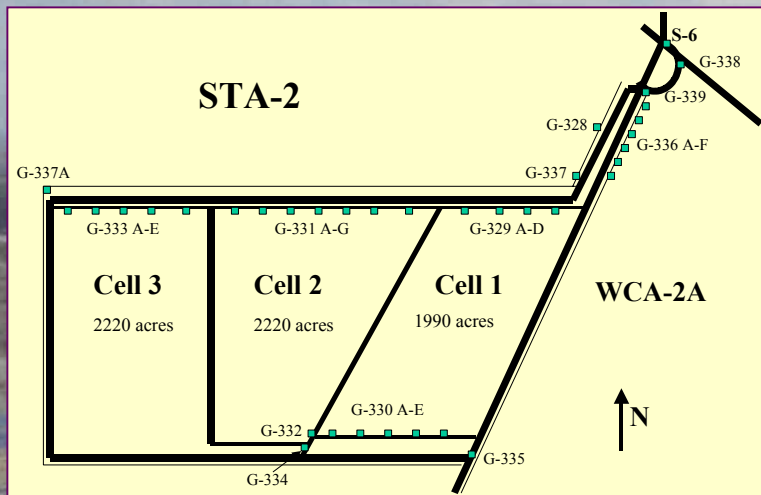
Over 123 tons removed to date

STA-1W P Concentrations - Water Year 2002

Discharge = 38 ppb



To date: average discharge concentration = 27 ppb

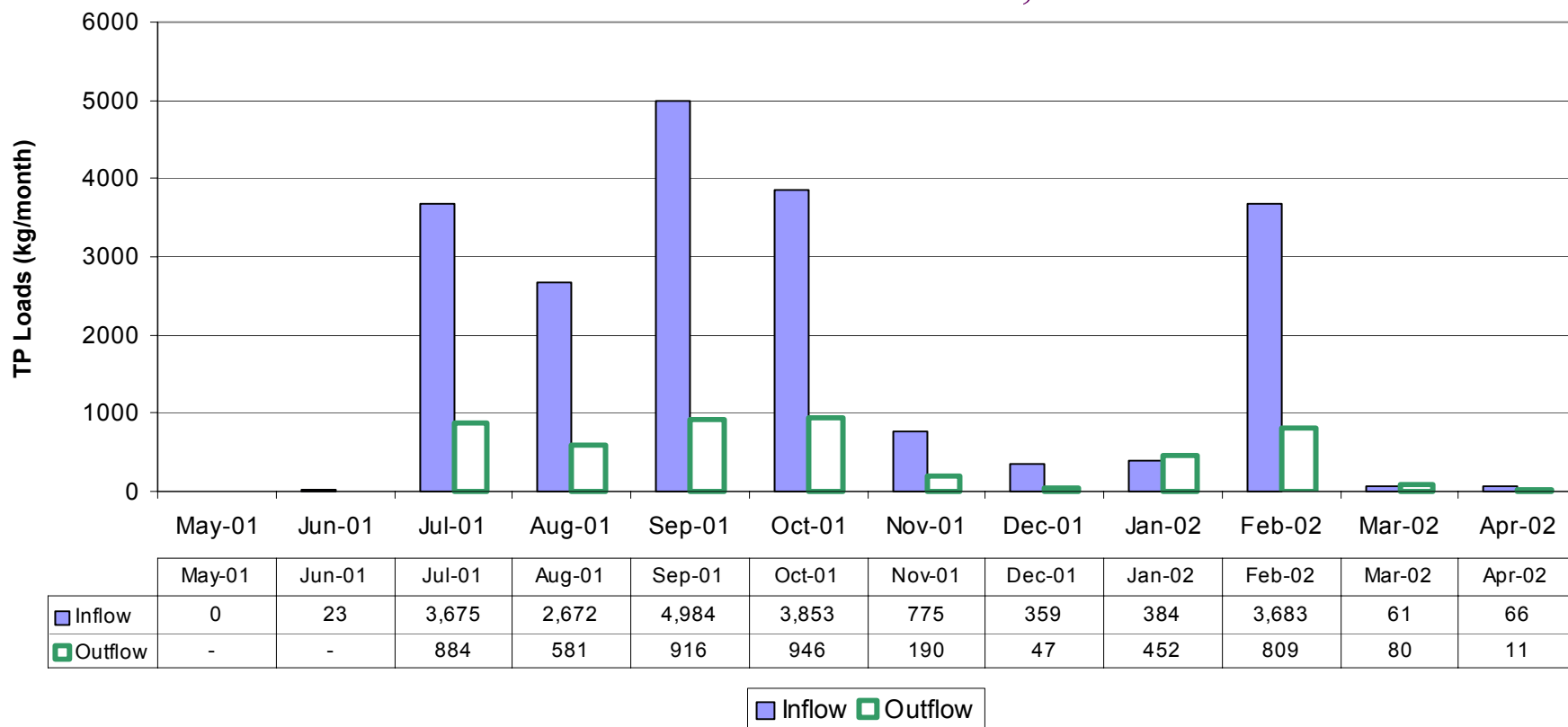


STA-2



STA-2 Load Reductions - Water Year 2002

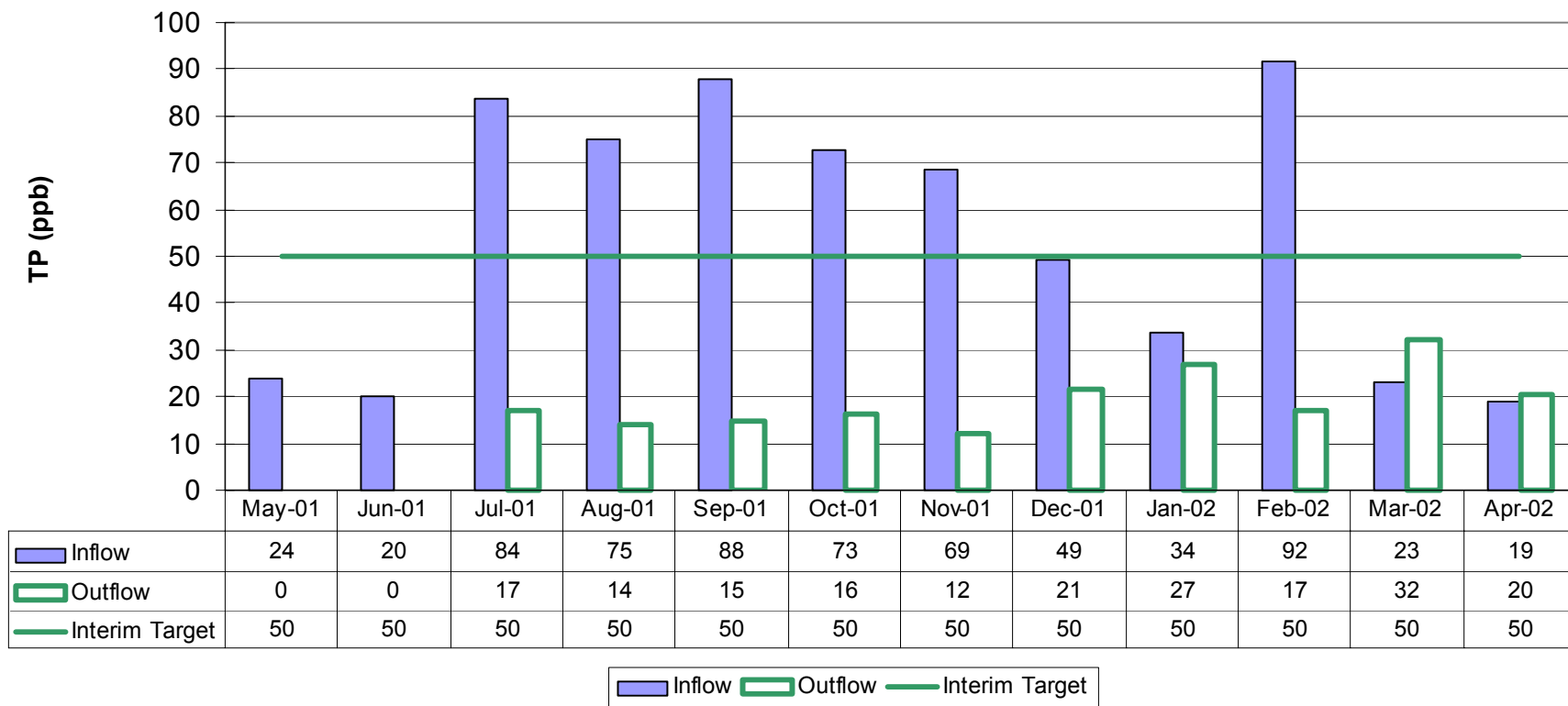
216,000 acre feet treated



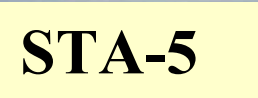
Over 15 tons removed to date

STA-2 P Concentrations - Water Year 2002

Discharge = 16 ppb



To date: average discharge concentration = 16 ppb



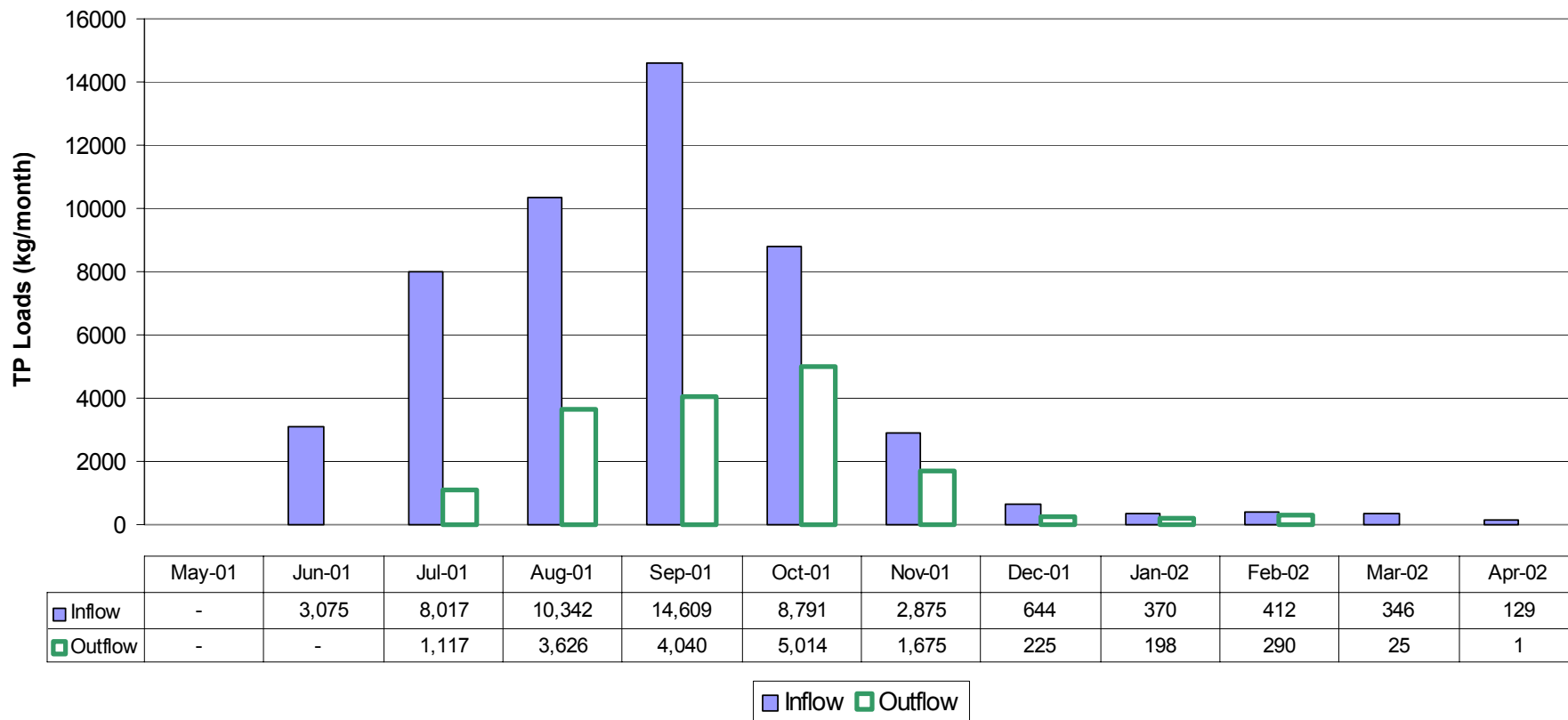
Cell 1B

Cell 1A



STA-5 Load Reductions - Water Year 2002

164,000 acre feet treated

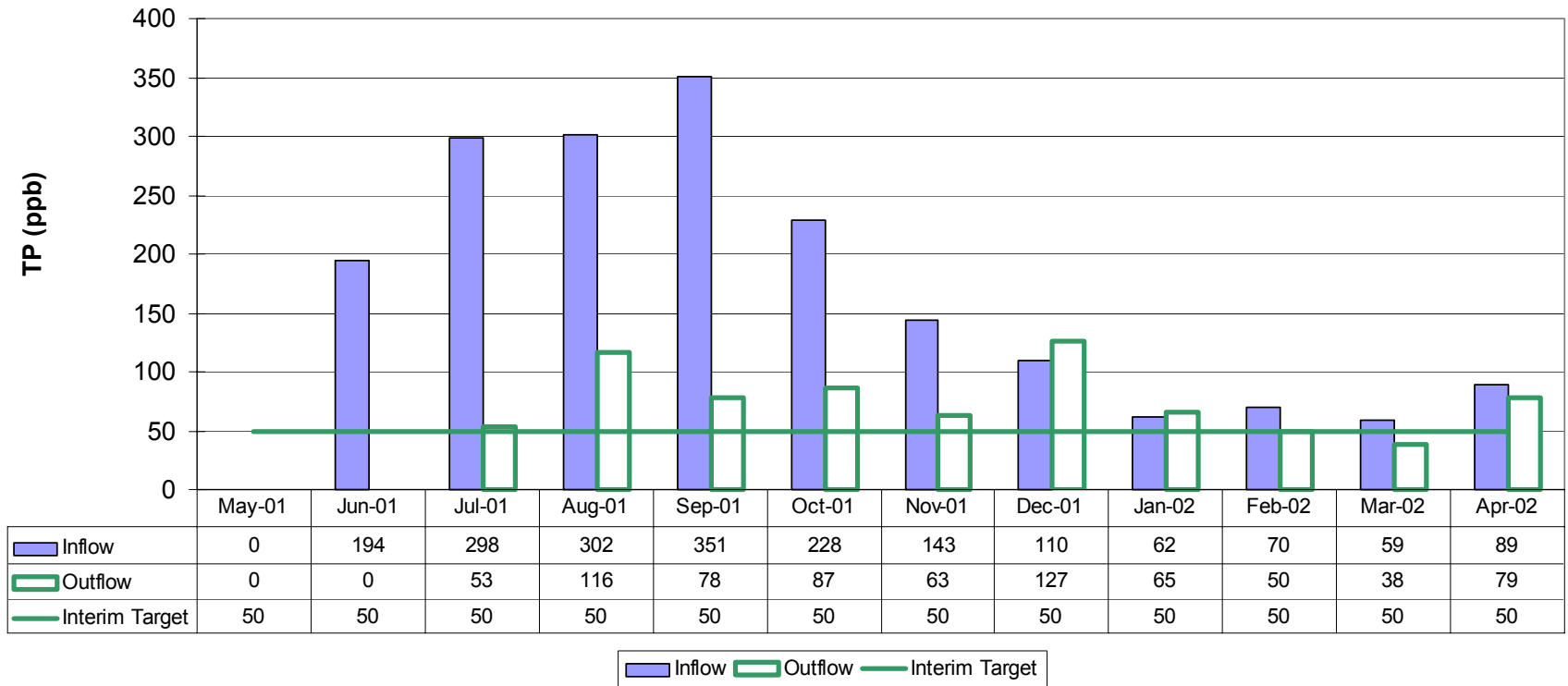


Over 41 tons removed to date

STA-5 P Concentrations - Water Year 2002

Discharge = 78 ppb (inflow = 245 ppb)

Note: The outlet gates were opened once per month between November and March for maintenance purposes; TP concentrations were elevated due to shallow water conditions.



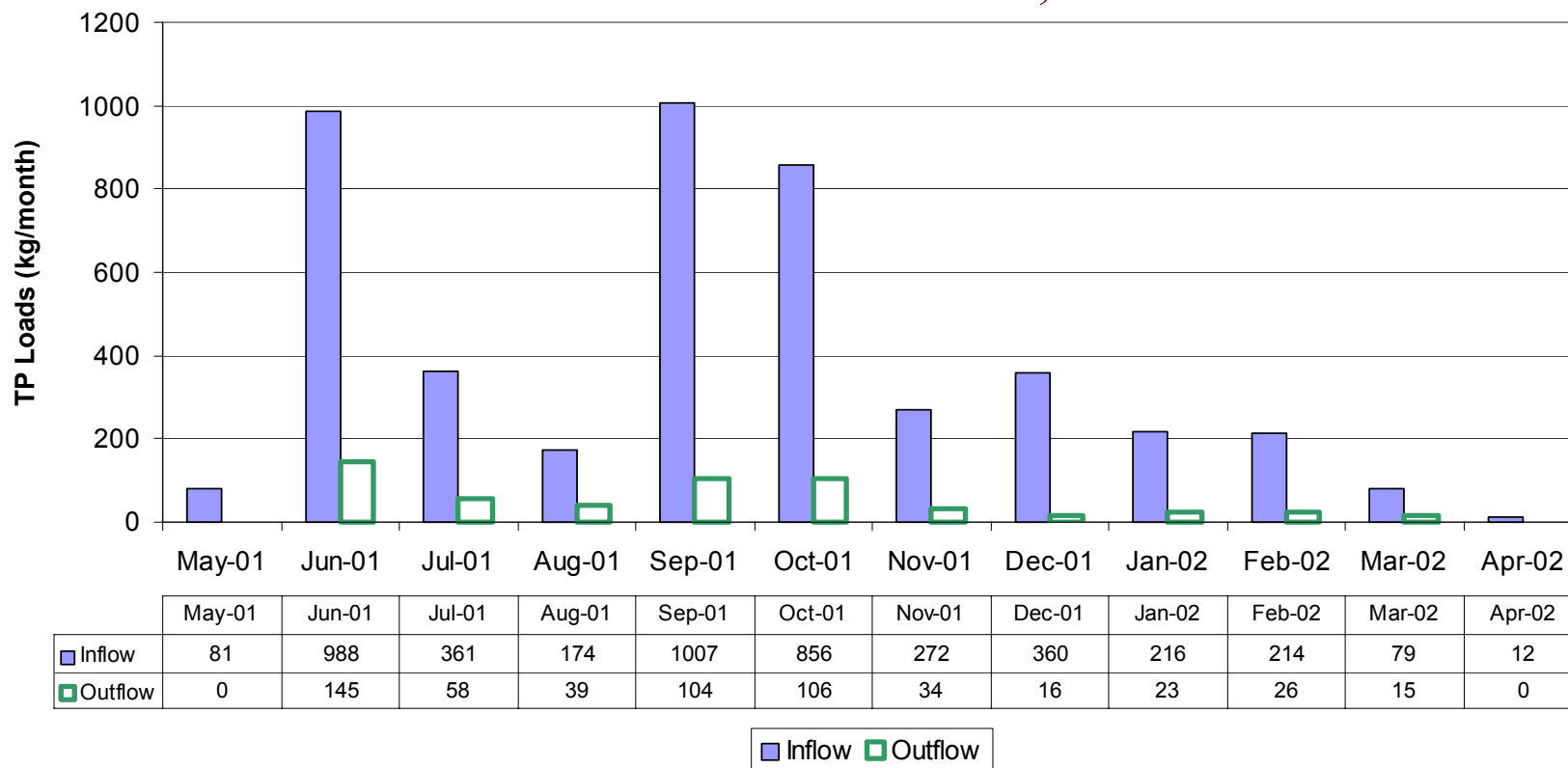
To date: average discharge concentration = 87 ppb

STA-6



STA-6 (1) Load Reductions - Water Year 2002

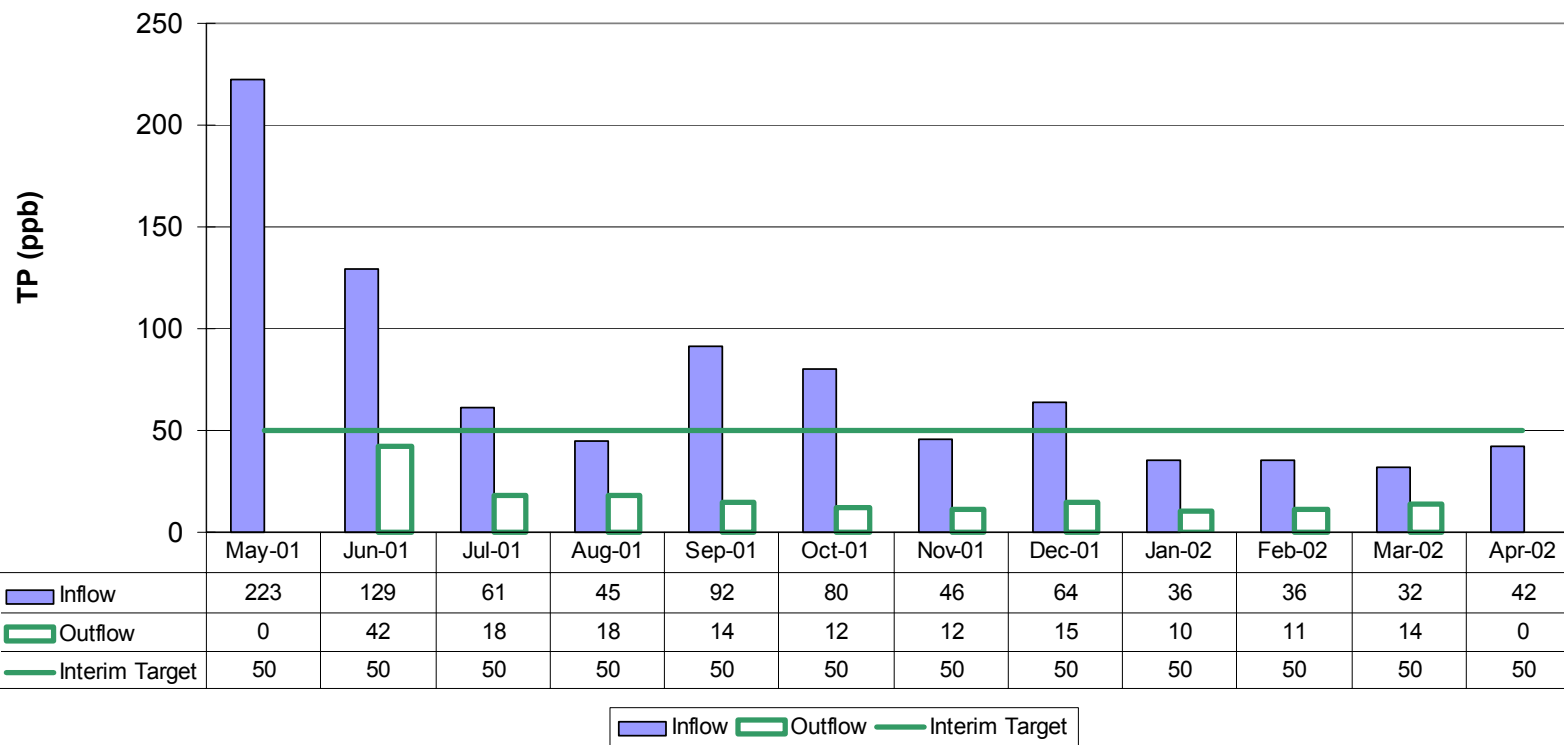
53,000 acre feet treated



Over 17 tons removed to date

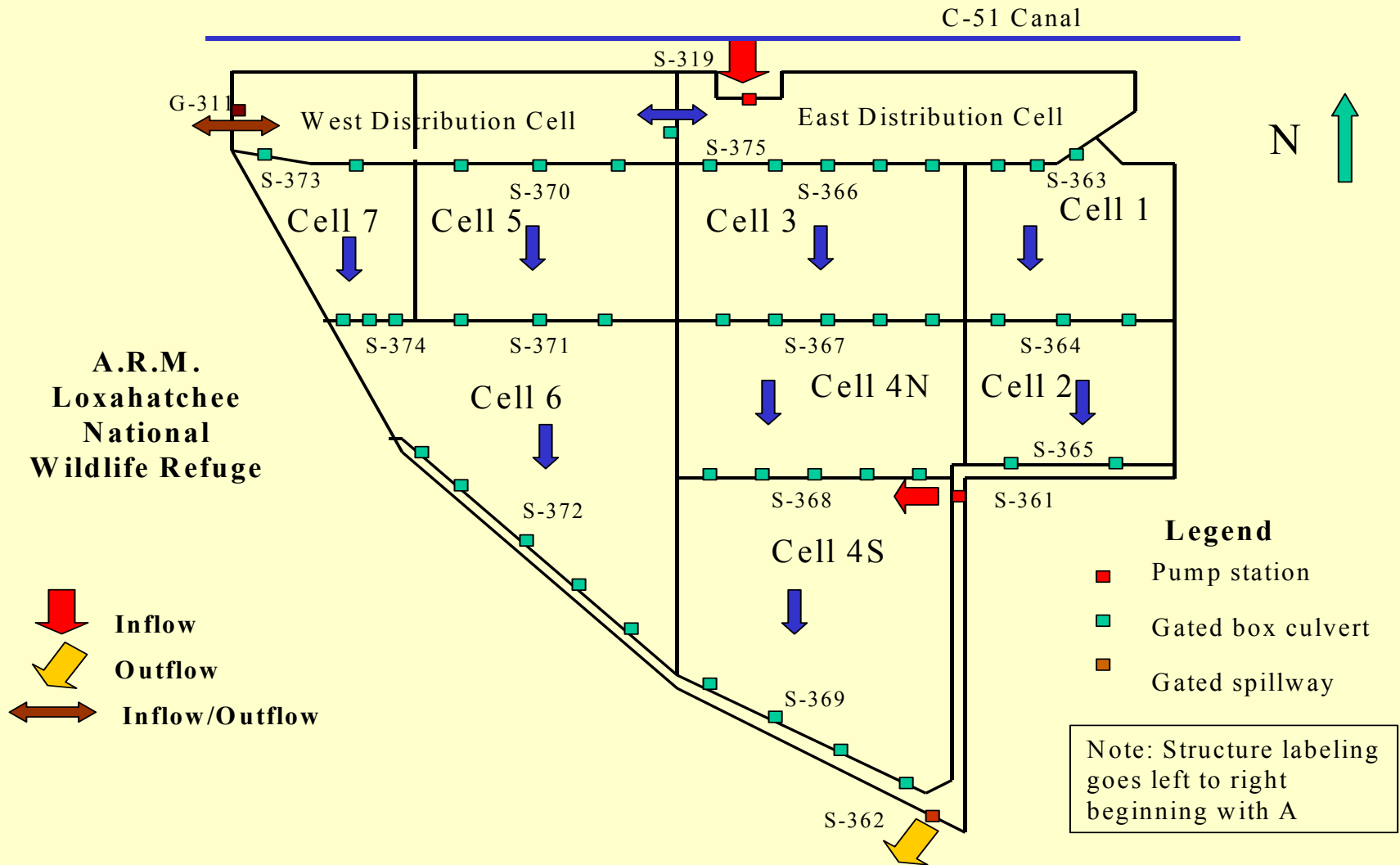
STA-6 (1) P Concentrations - Water Year 2002

Discharge = 16 ppb



To date: average discharge concentration = 19 ppb

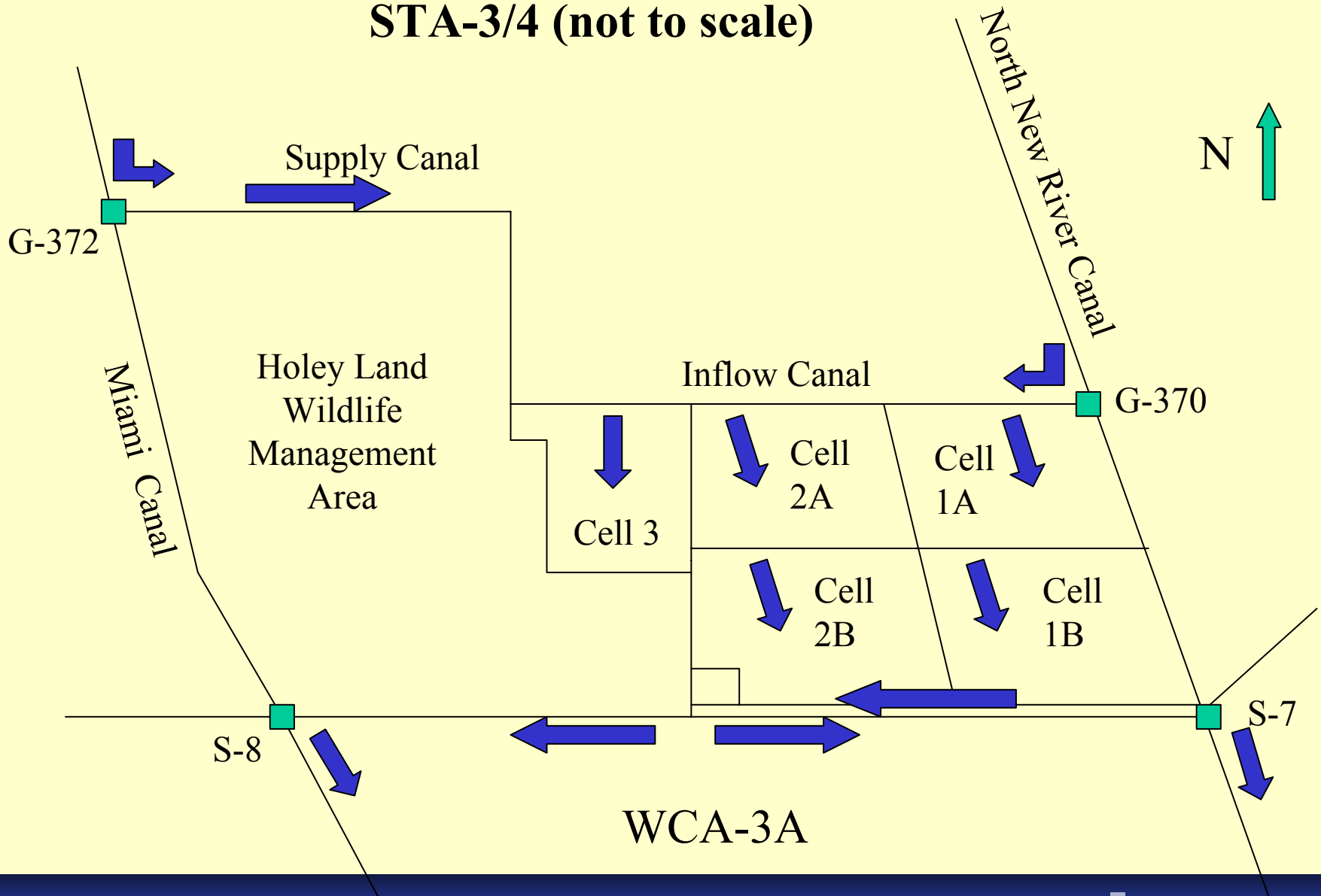
Schematic of STA-1 East (not to scale)



STA-1 East

- Under construction by the U.S. Army Corps of Engineers
- Will provide 5,350 acres of treatment area
- Designed to treat C-51W and EAA runoff
- Pump stations completion - June 2003
- June 2003 completion for eastern flow-way (Cells 1 and 2)
- January 2004 remaining construction completion

STA-3/4 (not to scale)



STA-3/4

- Under construction by SFWMD
- Will provide 16,480 acres of treatment area
- Designed to treat EAA runoff and Lake Okeechobee releases
- Target load reduction of over 40 tons per year
- Scheduled for construction completion Oct 2003

Additional Information

- **2003 Everglades Consolidated Report**
 - **available on-line:**
<http://www.sfwmd.gov/org/ema/everglades/index.html>
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